

TI-31362

Patent Amendment

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

1 (Previously presented). A method for controlling execution of multiple tasks in a processing circuit including several processing modules, comprising the steps of:
determining temperature-associated information at various areas of the processing circuit; and

in response to temperature-associated information indicating an excessive temperature at an area associated with a first of said processing modules, modifying parameters for executing tasks on one or more adjacent processing modules in order to reduce heat generated by the adjacent processing modules and contributing to the excessive temperature at the first processing module.

2 (Original). The method of claim 1 wherein said determining step comprises the step of monitoring operations executed by said modules.

3 (Original). The method of claim 1 wherein said determining step comprises the step of calculating power dissipation information at various locations in said processing circuit.

4 (Original). The method of claim 1 wherein said determining step comprises the step of calculating a current temperature at various locations in said processing circuit.

5 (Currently amended). A method for controlling execution of multiple tasks in a processing circuit including a plurality of processing modules, comprising the steps of:

generating a task allocation scenario for allocating multiple tasks among the plurality of processing modules;

prior to executing the tasks, estimating temperature-associated information for

TI-31362

Patent Amendment

various locations in the processing circuit as would occur if the tasks were executed according to the scenario;

determining whether a temperature threshold would be exceeded by executing the tasks according to the scenario.

6 (Original). The method of claim 5 wherein said step of generating a task allocation scenario comprises the step of receiving a task list describing the tasks to be executed and a task model describing the tasks.

7 (Original). The method of claim 6 wherein the task model includes initial area-specific power dissipation estimates for each task.

8 (Previously Presented). A processing circuit including a plurality of processing modules for executing multiple tasks comprising:

circuitry for determining temperature-associated information at various areas of the processing circuit; and

circuitry responsive to temperature-associated information indicating an excessive temperature at an area associated with a first of said processing modules for modifying parameters for executing tasks on one or more adjacent processing modules in order to reduce heat generated by the adjacent processing modules and contributing to the excessive temperature at the first processing module.

9 (Original). The processing circuit of claim 8 wherein said determining circuitry comprises circuitry for monitoring operations executed by said processing modules.

10 (Original). The processing circuit of claim 8 wherein said determining circuitry comprises circuitry for calculating power dissipation information at various locations in said processing circuit.

11 (Original). The processing circuit of claim 8 wherein said determining circuitry comprises circuitry for calculating a current temperature at various locations in said processing circuit.

TI-31362

Patent Amendment

12 (Currently amended). A processing circuit comprising:
a plurality of processing modules for executing multiple tasks; and
circuitry for generating a task allocation scenario for allocating the tasks among the processing modules, estimating temperature-associated information for various locations in the processing circuit as would occur if the tasks were executed according to the scenario and determining whether a temperature threshold would be exceeded if the tasks were to be executed according to the scenario.

13 (Original). The processing circuit of claim 12 wherein said circuitry for generating a task allocation scenario comprises circuitry for receiving a task list describing the tasks to be executed and a task model describing the tasks.

14 (Original). The processing circuit of claim 13 wherein the task model includes initial area-specific power dissipation estimates for each task.

15 (Previously presented). A mobile communications device comprising:
a plurality of processing modules for executing a plurality of tasks;
an antenna for receiving and transmitting signals; and
receiver/transmitter circuitry coupled to said antenna for sending and receiving audio and data signals, said receiver/transmitter circuitry including a processing circuit comprising:

circuitry for determining temperature-associated information at various areas of the processing circuit; and

circuitry responsive to temperature-associated information indicating an excessive temperature at an area associated with a first of said processing modules for modifying parameters for executing tasks on one or more adjacent processing modules in order to reduce heat generated by the adjacent processing modules and contributing to the excessive temperature at the first processing module.